



**JET PROPULSION LABORATORY
THE CALIFORNIA INSTITUTE OF TECHNOLOGY**

**ADDITIONAL GENERAL PROVISIONS (AGPs) SET
for All Subcontract Types**

(located at: <https://acquisition.jpl.nasa.gov/tc/>)

September 2015

***This document contains JPL's full list of AGPs.
Only those AGPs that are specifically incorporated into your subcontract apply.***

| GOVERNMENT SUBCONTRACT | |
|--|--|
| <p><i>This Subcontract is entered into by the Jet Propulsion Laboratory (JPL) and the Subcontractor in support of a U.S. Government Contract. JPL is a Federally-Funded Research & Development Center (FFRDC) per FAR 35.017, and is an operating division of the California Institute of Technology ("Caltech"), a private nonprofit educational institution.</i></p> <p><i>As used in the clauses referenced below and throughout this subcontract:</i></p> <ul style="list-style-type: none"><i>• Federal Acquisition Regulation (FAR) 52.202-1 (JAN 2012) "Definitions" is incorporated by reference.</i><i>• The term "JPL Subcontracts Manager" means a person with the authority to enter into, administer and/or terminate Subcontracts and make related determinations and findings.</i><i>• The following terms shall have the meaning set forth in FAR 2.101: "Agency head" (or "head of agency"), "commercial component," "component," "commercial item," and "nondevelopmental item."</i> | |

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SECTION A: ADDITIONAL GENERAL PROVISIONS WITH FULL TEXT

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ADVANCE PAYMENTS

- (a) Notwithstanding the clause of this Subcontract entitled "Allowable Cost and Payment," to the contrary, advance payments will be made to the Subcontractor as stated herein.
- (b) General Requirements.
 - (1) Request for Advance Payment. Subject to the conditions hereinafter set forth, the JPL will make an advance payment, or advance payments from time to time, to the Subcontractor. No advance payment will be made:
 - (A) Without the approval of JPL as to the financial necessity therefore;
 - (B) In an amount which together with all advance payments theretofore made, shall exceed the amount stated in Paragraph (4) below; and
 - (C) Without a properly certified invoice or invoices.
 - (2) Amount of Advance Payment.
 - (A) The Subcontractor shall determine the estimated amount of advance payment necessary to meet the requirements of Paragraph (5) hereof entitled "Use of Funds" to cover performance of the Subcontract. This determination shall be pursuant to written instructions provided by JPL relative to the:
 - (i) Shortest practical period for which advance payments will be provided;
 - (ii) Format and frequency of requests for advance payments; and

- (iii) Data required in support of each request.
- (B) The estimate will be adjusted by the amount which actual cash expenditures for prior performance periods of the Subcontract exceeded or was less than the advance payments provided for such performance. The Subcontractor shall submit its estimate and supporting data in a "Statement of Subcontractor's Request for Advance Payment" to JPL in writing. The request must be submitted sufficiently early to permit review, approval and disbursement of the required advance payment by the time the funds are actually needed by the Subcontractor.
- (3) Payment Method. Advance payments by check will be made in accordance with the clauses of Paragraphs (B) and (C) below:
 - (A) JPL reserves the right to redetermine the payment method to be used. Upon such redetermination, JPL will unilaterally amend this Subcontract and notify the Subcontractor in writing 45 days prior to the effective date of the change in the method of payments.
 - (B) JPL will review the Subcontractor's advance payment requirements to determine the reasonableness thereof, and if JPL concurs, the "Statement of Subcontractor's Request for Advance Payment" and/or invoice will be approved for payment. If JPL determines that the advance payment requested by the Subcontractor is in excess of cash requirements for Subcontract performance during the specified period of time, JPL will approve a reduced amount. Upon such reduction, JPL will notify the Subcontractor of the amount requested, the amount approved, and the reasons for reduction.
 - (C) The JPL will issue a check to the Subcontractor for the amount authorized by JPL and mail such check to the Subcontractor in time to be received on or about the date the funds are required for Subcontract performance.
- (4) Amount of Advance and Other Payments. In no instance will the total payments provided under the Subcontract as modified exceed the funds then allocated to the Subcontract and subject to the clauses of this Subcontract entitled "Limitation of Cost" or "Limitation of Funds," less any amount of withholding provided for by the Subcontract.
- (5) Use of Funds. The Subcontractor may use advance payment funds only to pay for properly allocable, allowable, and reasonable costs for direct materials, direct labor, indirect costs, or such other costs approved in writing by JPL. Payments are subject to any restrictions in other clauses of this Subcontract. Determinations of whether costs are properly allocable, allowable, and reasonable shall be in accordance with generally accepted accounting principles, subject to any applicable subparts of Part 31 of the Federal Acquisition Regulation, other applicable regulations referenced in Part 31, or subpart 1831.2.
- (6) Return of Funds. The Subcontractor may at any time repay all or any part of funds obtained by advance payments. When requested in writing by JPL, the Subcontractor shall repay to the JPL such amount of the balance of advance payments as JPL deems to be in excess of the Subcontractor's current needs.
- (7) Termination of Advance Payments. If the Subcontractor demonstrates an unwillingness or inability to establish procedures or follow the invoicing procedures provided in form JPL 2893, "Advance Payment Invoice Procedure - CREI Contracts," attached to this Subcontract, JPL may require immediate repayment to the JPL of the unliquidated balance of advance payments and unilaterally amend this Subcontract to prescribe an appropriate payment clause that will be applicable thereafter.
- (8) Liquidation. If, upon completion or termination of this Subcontract, all advance payments obtained by the Subcontractor have not been fully liquidated by authorized charges under the Subcontract, the unliquidated balance shall be deducted from any sums due to the Subcontractor from the JPL and any excess funds shall be repaid by the Subcontractor to the JPL upon demand.
- (9) Lien on Property Under Subcontract.
 - (A) Any and all advance payments made under this Subcontract shall be secured by a lien in favor of the Government, paramount to all other liens, upon the supplies or other things covered by this Subcontract and on all material and other property acquired for or allocated to the performance of this Subcontract, except to the extent that the Government by virtue of any other clause of this Subcontract, or otherwise, shall have valid title to such supplies, materials, or other property as against other creditors of the Subcontractor. The Subcontractor shall identify by marking or segregating all property which is subject to a lien in favor of the Government by virtue of any clause of this Subcontract in such a way as to

indicate that it is subject to such lien and that it has been acquired for or allocated to the performance of this Subcontract. If for any reason such supplies, materials, or other property are not identified by marking or segregation, the Government shall be deemed to have a lien to the extent of the Government's interest under this Subcontract on any mass of property with which such supplies, materials, or other property are commingled. The Subcontractor shall maintain adequate accounting control over such property on its books and records.

- (B) If, at any time during the progress of the work on the Subcontract, it becomes necessary to deliver any item or items and materials upon which the Government has a lien as aforesaid to a third person, the Subcontractor shall notify such third person of the lien herein provided and shall obtain from such third person a receipt in duplicate, acknowledging the existence of such lien. A copy of each receipt shall be delivered by the Subcontractor to JPL. If this Subcontract is terminated in whole or in part and the Subcontractor is authorized to sell or retain termination inventory acquired for or allocated to this Subcontract, such sale or retention shall be made only if approved by JPL, which approval shall constitute a release of the Government's lien hereunder to the extent that such termination inventory is sold or retained, and to the extent that the proceeds of the sale, or the credit allowed for such retention on the Subcontractor's termination claim, is applied in reduction of advance payments then outstanding hereunder.
- (1) Default Clauses. If any of the events of default under Paragraph (A) occurs, JPL without limiting any rights that it may otherwise have, may, in its discretion and upon written notice to the Subcontractor, withhold further payments on this Subcontract.
 - (A) Events of default include:
 - (i) A finding by JPL that the Subcontractor:
 - (a) Has failed to observe any of the covenants, conditions, or warranties of these clauses or has failed to comply with any material clause of this Subcontract;
 - (b) Has so failed to make progress, or is in such unsatisfactory financial condition, as to endanger performance of this Subcontract;
 - (c) Has allocated inventory to this Subcontract substantially exceeding reasonable requirements; or
 - (d) Is delinquent in payment of taxes or of the costs of performance of this Subcontract in the ordinary course of business.
 - (ii) Termination of this Subcontract by reason of fault of the Subcontractor; and
 - (iii) The commission of an act of bankruptcy (appointment of a trustee, receiver, or liquidator for all or a substantial part of the Subcontractor's property, or institution of bankruptcy, reorganization, arrangement or liquidation proceedings by or against the Subcontractor).
 - (B) Upon the continuance of any such events of default for a period of 30 days after such written notice to the Subcontractor, the JPL may, in its discretion, take the following additional actions as it may deem appropriate under the circumstances:
 - (i) Charge interest on advance payments outstanding during the period of any such default at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 Stat. 97;
 - (ii) Demand immediate repayment of the unliquidated balance of advance payments hereunder; or
 - (iii) Take possession of and, with or without advertisement, sell at public sale at which the Government may be the purchaser, or at private sale, all or any part of the property on which the Government has a lien under this Subcontract and, after deducting any expenses incident to such sale, apply the net proceeds of such sale in reduction of the unliquidated balance of advance payments hereunder and in reduction of any other claims of the JPL against the Subcontractor.
- (11) Prohibition Against Assignment. Notwithstanding any other clauses of this Subcontract, the Subcontractor shall not transfer, pledge, or otherwise assign this Subcontract or any interest therein, or any claim arising thereunder, to any party or parties, bank, trust company, or other financing institution. This Paragraph shall

not be deemed to take effect (nor shall the specific amounts in Paragraph (12) be determined) unless and until, with JPL Subcontract Manager approval, an advance payment is taken for estimated costs for future work to be performed under this subcontract and such paragraph shall remain in effect only until that advance payment has been fully utilized for subcontract performance or refunded.

(12) Information-Access to Records. The Subcontractor shall furnish to JPL such information concerning the financial operation of the Subcontractor's business as may be requested. The Subcontractor shall afford to JPL or its representative proper facilities for inspection of the Subcontractor's books, records and accounts, at all reasonable times until the expiration of three years from the date of final payment under this Subcontract. This Paragraph shall not be deemed to take effect (nor shall the specific amounts in Paragraph (12) be determined) unless and until, with JPL Subcontract Manager approval, an advance payment is taken for estimated costs for future work to be performed under this subcontract and such Paragraph shall remain in effect only until that advance payment has been fully utilized for subcontract performance or refunded.

(13) Other Security. The terms of this Subcontract shall be considered adequate security for advance payments hereunder, except that if at any time JPL deems the security furnished by the Subcontractor to be inadequate, the Subcontractor shall furnish such additional security as may be satisfactory to JPL, to the extent that such additional security is available.

(c) Method of Payment. JPL will make advance payments to the Subcontractor in accordance with the General Requirements set forth above and as herein detailed:

(1) Within 10 working days after receipt of a fully executed copy of the Subcontract or Subcontract Modification incorporating this clause, the Subcontractor shall prepare and submit to JPL, pursuant to Paragraph (b)(2)(B) above, the original and three copies each of two separate invoices in a format to be provided by JPL for each of the first two advance payment periods. The first period is from the date of the Subcontract or Subcontract Modification incorporating this clause through the first full calendar month. The second period is for the second succeeding full calendar month. The Subcontractor shall forward to JPL not later than the twentieth day of the first full month, an invoice for the third period. Beginning with the invoice for the fourth period, to be submitted not later than the twentieth day of the second full month, and each month thereafter, the Subcontractor shall forward to JPL an original and three copies of an invoice along with a "Statement of Subcontractor's Request for Advance Payment," in accordance with Paragraph (b)(2)(B) above, in a format to be provided by JPL in accordance with Paragraph (b)(2)(A) above. The Subcontractor shall liquidate the first advance payment on the invoice for the fourth advance payment request, submitted not later than the twentieth day of the second full month, and shall continue to liquidate advances in sequence against each subsequent advance request. The JPL will issue a check in the amount approved by JPL, to be received by the Subcontractor not later than the first day of the month for which advance payment was requested, except for the final month or months of Subcontract performance during which time any advance payments, then outstanding, will be liquidated. The Subcontractor shall continue to furnish to JPL each month a "Statement of Subcontractor's Request for Advance Payment," which will indicate the amount of Advance Payments being liquidated.

(2) Within 10 working days after receipt of the Subcontractor's first and second period advance payment invoices, the JPL will make its best effort to forward a check to the Subcontractor in the JPL-approved amount for the first advance payment requested. The JPL will forward a check to the Subcontractor for the second period advance payment and each payment thereafter, in the JPL approved amount, so as to be received by the Subcontractor not later than the first day of the month, for which the advance payment is being made.

AUDIT NEGOTIATION – ACCESS TO COMPUTERS

In conducting audits pursuant to FAR 52.215-2, Audits and Records- Negotiations, Government auditors shall be provided, at their option, access to physically inspect and inventory computer systems, equipment, and software used at JPL. This clause is applicable to all computers used at JPL, regardless of who owns the computers.

BOND REQUIREMENTS FOR SUBCONTRACT WORK ORDER (SWO) SUBCONTRACTS

(a) Payment Bond. If this Subcontract Work Order (SWO) exceeds \$150,000, the Subcontractor agrees to furnish a payment bond with good and sufficient surety or sureties acceptable to JPL to protect persons furnishing material or labor in connection with the performance of the work under this SWO on a form acceptable to JPL. The penal

sum of such payment bond shall be 100% of the original SWO amount, provided, however, that JPL may require an additional amount of bond for work added to this SWO by modification.

- (b) Performance Bond. If the SWO price exceeds \$150,000, the Subcontractor further agrees to furnish a performance bond with good and sufficient surety or sureties acceptable to JPL for the performance of work under this SWO on a form acceptable to JPL. The penal sum of such performance bond shall be 100% of the original SWO amount, provided, however that JPL may require an additional amount of bond for work added to this SWO by modification.
- (c) Any required bonds will be dated as of the same date as the notice of award of the individual SWO, and will be furnished by the Subcontractor to JPL at the same time the SWO is executed. Such bonds shall be in favor of the United States of America and the California Institute of Technology. Corporations executing the bonds as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein.
- (d) If any surety upon any bond furnished for the performance of this SWO becomes unacceptable to JPL or if any such surety fails to furnish reports as to its financial condition from time to time as requested by JPL, the Subcontractor shall promptly furnish such additional security as may be required from time to time to protect the interest of the Institute and the Government and of persons supplying labor or materials in the prosecution of the work contemplated by this SWO.

CEILING-PRICED: COMMERCIAL SERVICES

- (a) General. The Subcontractor shall submit invoices to JPL as indicated in the Schedule and discussed below. Payment to the Subcontractor for hours worked by the Subcontractor employees listed in the Schedule (or if there is no listing of personnel by name in the Schedule, then by personnel of the classification listed in the Schedule) will be based on the actual hours worked by such personnel in accordance with Paragraph (b) below. Reimbursement of the Subcontractor for travel and related expenses or allowances shall be allowable only if stated in the Schedule and shall be subject to the paragraphs below.
- (b) Timekeeping.
 - (1) For work to be performed for JPL at a JPL location, the Subcontractor shall accurately track and record the hours and days of the workweek and the hours of the workshift worked by its employees. Working time will be calculated in tenth-of-an-hour increments for each full six minutes beginning with the designated or approved shift starting time or the actual starting time, whichever is later. Mealtime deductions shall be appropriately determined by the Subcontractor. The Subcontractor shall establish a process that monitors its personnel leaving JPL premises during the workday.
 - (2) For work performed at a location other than JPL, the Subcontractor shall accurately track and record the hours and days of the workweek and the hours of the workshift worked by its employees. Unless otherwise provided for in this Subcontract, the Subcontractor shall maintain timekeeping records in accordance with form JPL 1725, "Minimum Timekeeping Requirements for Time-and-Material or Labor-Hour Type Procurements to be Performed at Off-Lab Facilities."
- (c) Hourly Rate.
 - (1) The amounts shall be computed by multiplying the appropriate hourly rates prescribed in the Schedule or Subcontract Work Order by the number of direct labor hours performed. The rates shall include wages, indirect costs, general and administrative expense, and profit. Working time will be calculated in tenth-of-an-hour increments for each full six minutes beginning with the designated or approved shift starting time or the actual starting time. Meal time deductions will be as determined by the Subcontractor. Working time shall not be computed beyond the end of the designated approved shift unless overtime is authorized. Invoices shall be submitted weekly, (unless another interval is specified in the Schedule) to the attention of the JPL Accounting Section. Invoices shall contain the accuracy representation as required by JPL, and shall be submitted by one of the authorized representatives specified in the Schedule. Promptly after receipt of each invoice, JPL shall, except as otherwise provided in this Subcontract, and subject to the terms of (f) below, pay the invoice as approved by JPL.
 - (2) Unless otherwise prescribed in the Schedule, JPL shall withhold five percent of the amounts due under this Subcontract for commercial services, or such other amount which JPL considers necessary to protect the interest of JPL and the Government, but the total amount withheld shall not exceed \$50,000. The amounts

withheld shall be retained until the execution and delivery of a release by the Subcontractor as provided in Paragraph (g) below.

- (3) Unless the Schedule prescribes otherwise, the hourly rates in the Schedule shall not be varied by virtue of the Subcontractor having performed work on an overtime basis.
- (d) Other Direct Costs. Allowable costs for other direct costs authorized in the Schedule shall be determined by JPL in accordance with Subpart 31.2 of FAR in effect on the date of this Subcontract and any corresponding implementing or supplementing clauses in the NFS. The Subcontract shall support all other direct costs claimed by submitting copies of paid invoices or by other substantiation acceptable to JPL.
- (e) Ceiling Price. JPL shall not be obligated to pay the Subcontractor any amount over the ceiling price in the Schedule absent a statement in a Unilateral Modification, or other Subcontract modification, increasing the ceiling price.
- (f) Audit. Before final payment under this Subcontract, JPL may audit or have audited the invoices or vouchers and substantiating material. Each payment previously made shall be subject to reduction to the extent of amounts, on preceding invoices or vouchers found by JPL not to have been properly payable and shall also be subject to reduction for overpayments or to increase for underpayments. Upon receipt and approval of the voucher or invoice designated by the Subcontractor as the "completion voucher" or "completion invoice", and upon compliance by the Subcontractor with all terms of this Subcontract (including, without limitation, terms of Paragraphs (g) and (h) below), JPL shall promptly pay any balance due the Subcontractor. The completion invoice or voucher shall be submitted by the Subcontractor as promptly as practicable following completion of the work under this Subcontract, but in no event later than six months (or such longer period as JPL may approve in writing) from the date of completion.
- (g) Release. The Subcontractor, and each assignee under an assignment entered into under this Subcontract and in effect at the time of final payment under this subcontract, shall execute and deliver, at the time of and as a condition precedent to final payment under this Subcontract, a release discharging JPL, its officers, agents, and employees of and from all liabilities, obligations, and claims arising out of or under this Subcontract, subject only to the following exceptions:
 - (1) Specified claims in stated amounts, or in estimated amounts if the amounts are not susceptible of exact statement by the Subcontractor.
 - (2) Claims with reasonable incidental expenses, based upon the liabilities of the Subcontractor to third parties arising out of performing this Subcontract, that are not known to the Subcontractor on the date of the execution of the release, and of which the Subcontractor gives notice in writing to JPL not over six years after the date of the release or the date of any notice to the Subcontractor that JPL is prepared to make final payment, whichever is earlier.
 - (3) Claims for reimbursement of costs (other than expenses of the Subcontractor by reason of its indemnification of JPL or the Government against patent liability), including reasonable incidental expenses, incurred by the Subcontractor under the terms of this Subcontract relating to patents.
- (h) Refunds. The Subcontractor agrees that any refunds, rebates, or credits (including any related interest) accruing to or received by the Subcontractor or any assignee, that arise under the materials or other direct costs portion of this Subcontract and for which the Subcontractor has received reimbursement, shall be paid by the Subcontractor to JPL. The Subcontractor and each assignee, under an assignment entered into under this Subcontract and in effect at the time of final payment under this Subcontract, shall execute and deliver, at the time of and as a condition precedent to final payment under this Subcontract, an assignment to JPL of such refunds, rebates, or credits (including any interest) in form and substance satisfactory to JPL.

CEILING PRICED: LIMITATION OF JPL'S OBLIGATION

JPL shall not be obligated to pay the Subcontractor any amount over the ceiling price set forth in this Subcontract and the Subcontractor shall not be obligated to continue performance by virtue of which JPL's obligation hereunder would exceed such ceiling price, unless and until JPL shall have notified the Subcontractor in writing that such ceiling price has been increased and shall have specified in such notice a revised ceiling price which shall thereupon constitute the ceiling price for performance of this Subcontract. When and if the ceiling price set forth in this Subcontract has been increased, payment for any work performed or goods delivered prior to the increase shall be payable to the same extent as if performed or delivered after such increase in the ceiling price.

DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE

- (a) For purposes of administration of the clause of this Subcontract entitled "New Technology" or "Patent Rights--Retention by the Subcontractor (Short Form)," whichever is included, the following named representatives are hereby designated to administer such clause:

| Title | Office Code | Address (including zip code) |
|-------------------------------|-------------|---|
| New Technology Representative | MS/ 180-801 | NASA Management Office at JPL 4800 Oak Grove Drive Pasadena, CA 91109 |
| Patent Representative | MS/ 180-802 | NASA Management Office at JPL 4800 Oak Grove Drive Pasadena, CA 91109 |

- (b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative with a copy to the Subcontracts Manager unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any lower-tier Subcontract hereunder requiring a "New Technology" clause or "Patent Rights--Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer through JPL.

The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

EARNED VALUE MANAGEMENT SYSTEM (EVMS)

- (a) This paragraph is applicable (and paragraph (b) is inapplicable) if the value of this Subcontract is less than \$50 million. The Subcontractor shall have an EVMS which is compliant with the American National Standards Institute/Electronic Industries Alliance Standard 748 (ANSI/EIA 748). In addition, if the Subcontractor has an EVMS which has been formally validated (determined to comply with ANSI/EIA 748 by a Cognizant Federal Agency), such EVMS shall be used.
- (b) This paragraph is applicable (and paragraph (a) is inapplicable) if the value of this Subcontract is \$50 million or more. The Subcontractor shall use an EVMS which has been formally validated (determined to comply with ANSI/EIA 748 by a Cognizant Federal Agency).
- (c) The Subcontractor shall implement an integrated baseline review (IBR) consisting of a joint assessment between the Subcontractor and JPL to assess areas such as planning, complete coverage of the statement of work, logical scheduling of the work activities, adequate resource loading and identification of inherent risks.
- (d) The Subcontractor shall comply with the documentation required for the Subcontract Data Requirements List (SDRL) and Data Requirement Description (DRD) Resources Management (RM) RM-001 through RM-008 incorporated into this Subcontract.
- (e) The Subcontractor agrees to provide access to all pertinent records and data requested by JPL. Access is to permit JPL surveillance to ensure that EVMS complies, and continues to comply with this clause.
- (f) The Subcontractor shall include this clause, including this paragraph (f), in lower-tier subcontracts awarded under this Subcontract with a value of \$20 million or more.

FLIGHT SYSTEMS OR SUBSYSTEMS - OVERTIME

- (a) Personnel employed by the Subcontractor are precluded from working overtime (paid or unpaid) greater than 20 hours per week (for a total work week not to exceed 60 hours) for over 6 continuous weeks.

- (b) Overtime that includes a normal workweek of 40 hours and exceeds 20 hours per week for 2 consecutive weeks shall not be continued without Subcontractor senior line management approval (Vice President or above) and with the written concurrence of JPL.

HIGH HAZARD WORK

- (a) The Subcontractor shall provide a full time Safety Professional on site monitoring safety requirements when high hazard work is being performed that poses many potential imminent hazards. Examples of high hazard work are: major demolition of multi-level buildings, structural steel erection of three stories or more, erection and dismantling of large scaffolds where engineering is required, excavations of 20 feet or deeper, use of crane suspended personnel platforms (man lifts), working on complex high-voltage electrical systems, or other activities as determined by the JPL Occupational Safety Program Office requiring 100% Safety Professional oversight of the hazardous activities.
- (b) The Safety Professional must meet the following minimum criteria:
 - (1) Minimum of five years of documented and continuous safety experience;
 - (2) Minimum of three years of documented safety experience in similar types of construction projects; and
 - (3) B.S. degree in Health and Safety or related field.

INTEGRATION OF ENVIRONMENT, SAFETY, AND HEALTH INTO THE SUBCONTRACTOR'S MANAGEMENT SYSTEM

- (a) For the purposes of this clause, the environmental, safety, and health system (ESHS) encompasses safety and health of employees, protection of environment, and the protection of the facility (plant) and products from damage, and includes pollution prevention, waste minimization, efficient energy management practices; and
- (b) In performing work under this Subcontract, the Subcontractor shall perform work safely to ensure adequate protection of the public, employees, the facility (plant) and product from damage, and the environment, and shall be accountable for the safe performance of work. The Subcontractor shall integrate environmental, safety and health requirements into program missions and Center operations. Environment, safety, and health programs shall be operated as an integral and visible part of how the organization conducts both its mission and facility operational business, including the management of both routine and emergency operations. The Subcontractor shall exercise due care commensurate with the associated hazards of the work. The Subcontractor shall ensure that management of environment, safety, and health functions and activities becomes an integral and visible part of the Subcontractor's work planning and execution processes. The Subcontractor shall ensure that:
 - (1) Line management is responsible for establishing, maintaining, and enforcing safe and healthful working conditions and procedures for all personnel. All personnel shall take every reasonable measure to ensure safe and healthful operations and conditions in accomplishing its work, including the protection of the public, the facility, the product, and the environment from injury, illness, or damage.
 - (2) Clear and unambiguous lines of authority and responsibility for ensuring appropriate environment, safety, and health processes are established and maintained at all organizational levels.
 - (3) Employees possess the experience, knowledge, skills, and abilities necessary to discharge their responsibilities.
 - (4) Resources are allocated to address environment, safety, and health, programmatic, and operational considerations. Protecting the public and the employees from injury or illness, the facility (plant) and product from damage and the environment is a priority whenever activities are planned and performed.
 - (5) The ESHS will be designed to integrate management of environmental practices, and ensure compliance with applicable laws, regulations, and policies. The ESHS implements, the environmental management system requirements of NPR 8553.1B, NASA Environmental Management System, dated September 22, 2009, with the following understandings:

- (A) All Center-led reviews referenced in the NPR are self-assessments.
- (B) Regarding Paragraph 2.1.4(d), the Subcontractor's environmental policy shall not be made available to the public.
- (C) Regarding Paragraphs 4.2.1(a) and 4.2.1(b), Subcontractor-wide training will be provided to Subcontractor employees who elect to take it; however, this will not be mandatory training. This does not exempt employees from taking mandatory training required under federal, state or local regulation.
- (6) Before work is performed, the associated hazards are evaluated and environment, safety and health standards and requirements are established which, if properly implemented, should provide adequate assurance that employees, the public, and the environment are protected from adverse consequences.
- (7) Administrative and engineering controls to prevent and mitigate hazards are tailored to the work being performed and associated hazards. Emphasis should be on designing the work and/or controls to reduce or eliminate the hazards and to prevent accidents and unplanned releases and exposures.
- (c) The Subcontractor shall manage and perform work in under a documented site wide integrated ESHS that fulfills all conditions in paragraph (b) of this clause at a minimum. Documentation of the ESHS in an ESHS Plan shall describe how the Subcontractor will:
 - (1) Define the scope of work;
 - (2) Identify and analyze hazards associated with the work;
 - (3) Develop and implement hazard controls;
 - (4) Perform work within controls;
 - (5) Provide feedback on adequacy of controls and continue to improve safety management; and;
 - (6) Describe how the Subcontractor will measure system effectiveness.
- (d) The Subcontractor shall submit to JPL documentation of its ESHS Plan for review and comment. JPL will establish dates for submittal, review, and comment on the ESHS Plan. Guidance on the preparation, content, review, and approval of the ESHS Plan will be provided by JPL. The Subcontractor shall review and update its ESHS Plan annually and submit documentation to the JPL Subcontracts Manager for review.
- (e) The Subcontractor shall maintain the integrity of its ESHS and ensure it is integrated with the Subcontractor's business processes for work planning, budgeting, authorization, execution, and change control.
- (f) The Subcontractor shall comply with, and assist JPL in complying with, environment, safety, and health requirements of all laws and regulations, and applicable Government Policies. The Subcontractor shall cooperate with Federal and non-Federal agencies having jurisdiction over environment, safety, and health matters under this Subcontract.
- (g) The Subcontractor shall promptly evaluate and resolve any non-compliance with applicable environmental, safety, and health requirements of this Subcontract, and the ESHS Plan. If the Subcontractor fails to provide resolution or if the Subcontractor's action or inaction causes substantial harm or an imminent danger to the environment or health and safety of employees or the public, JPL may issue an order stopping work in whole or in part. Any stop work order issued by JPL under this clause (or issued by the Subcontractor to a lower-tier subcontractor under Paragraph (i) of this clause) shall be without prejudice to any other legal or contractual rights of JPL. If JPL issues a stop work order, an order authorizing the resumption of the work may be issued at the discretion of JPL. The Subcontractor shall not be entitled to an extension of time or additional fee or damages by or in connection with, any work stoppage ordered under the warranted exercise of this Paragraph.
- (h) The Subcontractor is responsible for flowing down the environment, safety, and health requirements applicable to this Subcontract to lower-tier subcontracts at any tier to the extent necessary to ensure the Subcontractor's compliance with the requirements.
- (i) The Subcontractor shall include a clause substantially the same as this clause in lower-tier subcontracts involving hazardous work on site at a NASA-owned or-leased facility. Such lower-tier subcontracts shall provide

for the right to stop work under the conditions described in paragraph (g) of this clause. Depending on the complexity and hazards associated with the work, the Subcontractor may choose not to require the lower-tier subcontractor to submit an ESHS Plan for the Subcontractor's review and approval.

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| LIMITATION OF OBLIGATION AND LIMITATION OF COST FOR TASK SWOs |
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(This AGP supersedes the clause of this Subcontract entitled "Limitation of Cost.")

- (a) The parties estimate that the total cost for performance of an individual Subcontract Work Order (SWO), exclusive of any fee, will not cost the JPL more than (i) the estimated cost specified in the individual Subcontract Work Order (SWO), or, (ii) if this is a cost-sharing Subcontract, the JPL's share of the estimated cost specified in the individual Subcontract Work Order (SWO). The Subcontractor agrees to use its best efforts to perform the work specified in each individual Subcontract Work Order (SWO) and all obligations under each individual Subcontract Work Order (SWO) within the estimated cost of such SWO which, if this is a cost-sharing Subcontract, includes both the JPL's and the Subcontractor's share of the cost.
- (b) The Subcontractor shall notify JPL in writing whenever it has reason to believe that:
 - (1) The costs the Subcontractor expects to incur under any individual Subcontract Work Order (SWO) in the next 60 days, when added to all costs previously incurred, will exceed 75% of the estimated cost specified in that individual Subcontract Work Order (SWO); or
 - (2) The total cost to perform an individual Subcontract Work Order (SWO), exclusive of any fee, will be greater or substantially less than had been previously estimated.
- (c) As part of the notification, the Subcontractor shall provide JPL a revised estimate of the total cost of performing the individual Subcontract Work Order (SWO).
- (d) Except as required by other clauses of this Subcontract, specifically citing and stated to be an exception to this Clause:
 - (1) The JPL is not obligated to reimburse the Subcontractor for costs incurred in excess of (i) the estimated cost specified in an individual Subcontract Work Order (SWO) or, (ii) if this is a cost-sharing Subcontract, the estimated cost to the JPL specified in the individual Subcontract Work Order (SWO); and
 - (2) The Subcontractor is not obligated to take action under the "Termination" Clause of this Subcontract or to continue performance under an individual Subcontract Work Order (SWO) or otherwise incur costs in excess of the estimated cost specified in the individual Subcontract Work Order (SWO), until JPL (i) notifies the Subcontractor in writing that the estimated cost has been increased and (ii) provides a revised estimated total cost of performing that individual Subcontract Work Order (SWO). If this is a cost-sharing Subcontract, the increase shall be allocated in accordance with the formula specified in the individual Subcontract Work Order (SWO).
- (e) No notice, communication, or representation in any form other than that specified in subparagraph (d)(2) above, or from any person other than a duly authorized representative of JPL shall affect the estimated cost of an individual Subcontract Work Order (SWO). Absent the specified notice, the JPL is not obligated to reimburse the Subcontractor for any costs in excess of the estimated cost, or if this is a cost-sharing Subcontract, for any costs in excess of the estimated cost to the JPL specified in the individual Subcontract Work Order (SWO), whether those excess costs were incurred during the course of the individual Contract Work Order (SWO) or as a result of termination.
- (f) If the estimated cost specified in the individual Subcontract Work Order (SWO) is increased, any costs the Subcontractor incurs before the increase that are in excess of the previously estimated cost shall be allowable to the same extent as if incurred afterward, unless JPL issues a termination or other notice directing that the increase is solely to cover termination or other specified expenses.
- (g) Directions, orders, notices, requests issued by JPL under the "Changes" Clause or any other clause of this Subcontract shall not be considered an authorization to exceed the estimated cost specified in an individual Subcontract Work Order (SWO), absent a statement in a Unilateral Modification or other Subcontract Modification increasing the estimated cost.

- (h) Limitation of Obligation: The JPL shall not be obligated to pay the Subcontractor any amount in excess of the estimated cost set forth in the SWO and the Subcontractor shall not be obligated to continue performance of the work described in such SWO or, to otherwise incur costs in excess of such estimated cost, unless and until JPL issues a written SWO Supplement increasing such estimated cost.

LIMITATION OF OBLIGATION AND LIMITATION OF FUNDS FOR TASK SWOs

(This AGP supersedes the clause of this Subcontract entitled "Limitation of Funds.")

This clause shall be applicable to an individual Subcontract Work Order (SWO) and the clause of this Subcontract entitled "Limitation of Obligation and Limitation of Cost for Task SWO Contracting" inapplicable to such individual SWO until such time as an amount equal to the total estimated cost and fee set forth in the individual SWO is allotted to this Subcontract and thereafter the clause of this Subcontract entitled "Limitation of Obligation and Limitation of Cost for Task SWO Contracting" shall be applicable and this clause inapplicable, unless and until the amount allotted to the individual SWO once again becomes less than the total estimated cost and fee set forth in the individual SWO.)

- (a) The parties estimate that performance of each individual Subcontract Work Order (SWO) will not cost JPL more than (i) the estimated cost and fee specified in each individual SWO or, (ii) if this is a cost-sharing contract, JPL's share of the estimated cost and fee specified in each individual SWO. The Subcontractor agrees to use its best efforts to perform the work specified in each individual SWO and all obligations under each individual SWO within the estimated cost, which, if this is a cost-sharing contract, includes both JPL's and the Subcontractor's share of the cost.
- (b) Each individual Subcontract Work Order (SWO) specifies the amount presently available for payment by JPL and allotted to the individual SWO, or JPL's share of the cost if this is a cost-sharing contract. The parties contemplate that JPL will allot additional funds incrementally to each individual SWO up to the full estimated cost to JPL specified in each individual SWO, exclusive of any fee. The Subcontractor agrees to perform, or have performed, work on each individual SWO up to the point at which the total amount paid and payable by JPL under each individual SWO approximates but does not exceed the total amount allotted by JPL to each individual SWO.
- (c) The Subcontractor shall notify JPL in writing whenever it has reason to believe that the costs which it expects to incur in the performance of an individual Subcontract Work Order (SWO) in the next succeeding 60 days, when added to (i) all costs previously incurred; (ii) the amount of termination costs that would be payable by JPL in the event of termination of the SWO for the convenience of JPL; and (iii) any fee paid or payable up through such period; will either (i) exceed the total amount so far allotted to the individual SWO JPL or, (ii) if this is a cost-sharing contract, the amount then allotted to the individual SWO JPL plus the Subcontractor's corresponding share.
- (d) If, after notification, additional funds are not allotted in sufficient time to enable the Subcontractor to continue performance of an individual Subcontract Work Order (SWO) in a timely manner, JPL will, upon written request by the Subcontractor, negotiate a closeout of the SWO.
- (e) Except as required by other clauses of this Subcontract, specifically citing and stated to be an exception to this clause:
- (1) JPL is not obligated to reimburse the Subcontractor for costs incurred in excess of the total amount allotted by JPL to each individual Subcontract Work Order (SWO); and
 - (2) The Subcontractor is not obligated to take action under the "Termination" clause of this Subcontract or to continue performance under an individual Subcontract Work Order (SWO) or otherwise incur costs in excess of (i) the amount then allotted to that individual Subcontract Work Order (SWO) by JPL or, (ii) if this is a cost-sharing contract, the amount then allotted by JPL to that individual Subcontract Work Order (SWO) plus the Subcontractor's corresponding share, until JPL notifies the Subcontractor in writing that the amount allotted by JPL has been increased and specifies an increased amount, which shall then constitute the total amount allotted by JPL to that individual Subcontract Work Order (SWO).
- (f) The estimated cost shall be increased to the extent that (i) the amount allotted by JPL or, (ii) if this is a cost-sharing contract, the amount then allotted by JPL to the individual Subcontract Work Order (SWO) plus the Subcontractor's corresponding share, exceeds the estimated cost specified in the individual Subcontract Work Order (SWO). If this is a cost sharing contract, the increase shall be allocated in accordance with the formula specified in the individual Subcontract Work Order (SWO).

- (g) No notice, communication, or representation in any form other than that specified in paragraph (e)(2) above, or from any person other than a duly authorized representative of JPL, shall affect the amount allotted by JPL to an individual Subcontract Work Order (SWO). Absent the specified notice, JPL is not obligated to reimburse the Subcontractor for any costs in excess of the total amount allotted by JPL to the individual SWO, whether incurred during the course of the Subcontract or as a result of termination.
- (h) When and if the amount allotted by JPL to an individual Subcontract Work Order (SWO) is increased, any costs the Subcontractor incurs before the increase that are in excess of (i) the amount previously allotted by JPL to the Subcontract, or (ii) if this is a cost-sharing Subcontract, the amount previously allotted by JPL plus the Subcontractor's corresponding share, shall be allowable to the same extent as if incurred afterward, unless JPL issues a termination or other notice and directs that the increase is solely to cover termination or other specified expenses.
- (i) Change orders shall not be considered an authorization to exceed the amount allotted by JPL specified in the individual Subcontract Work Order (SWO), unless they contain a statement increasing the amount allotted.
- (j) Nothing in this clause shall affect the right of JPL to terminate this Subcontract. If this Subcontract is terminated, JPL and the Subcontractor shall negotiate an equitable distribution of all property produced or purchased under the Subcontract, based upon the share of costs incurred by each.
- (k) If JPL does not allot sufficient funds to allow completion of the work, the Subcontractor is entitled to a percentage of the fee specified in each individual Subcontract Work Order (SWO) equaling the percentage of completion of the work contemplated by each individual Subcontract Work Order (SWO).
- (l) Limitation of Obligation: JPL shall not be obligated to pay the Subcontractor any amount in excess of the amount allotted to a SWO and the Subcontractor shall not be obligated to continue performance of the work described in such SWO or, to otherwise incur costs in excess of the amount, allotted to that SWO unless and until JPL shall have issued a written SWO Supplement increasing such allotted amount.

NOTIFICATION PRIOR TO ACQUIRING INFORMATION TECHNOLOGY SYSTEMS FROM ENTITIES OWNED, DIRECTED OR SUBSIDIZED BY THE PEOPLE'S REPUBLIC OF CHINA

- (a) Definitions –
 - “Acquire”** means procure with appropriated funds by and for the use of NASA, JPL or subcontractor through purchase or lease.
 - “Entity owned, directed or subsidized by the People’s Republic of China”** means any organization incorporated under the laws of the People’s Republic of China.
 - “Information Technology (IT) System”** means the combination of hardware components, software, and other equipment to make a system whose core purpose is to accomplish a data processing need such as the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data. IT systems include ground systems in support of flight hardware. IT systems do not include—
 - (i) Systems acquired by a subcontractor incidental to a subcontract;
 - (ii) Imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology systems;
 - (iii) Services in support of IT systems, such as help desk services; or
 - (iv) Flight hardware, which includes aircraft, spacecraft, artificial satellites, launch vehicles, balloon systems, sounding rockets, on-board instrument and technology demonstration systems, and equipment operated on the International Space Station; as well as prototypes, and engineering or brass boards created and used to test, troubleshoot, and refine air- and spacecraft hardware, software and procedures.

- (b) Section 516 of the Consolidated and Further Continuing Appropriation Act, 2013 (Pub. L.113-6), requires NASA's Office of the Chief Information Officer (OCIO) to assess the risk of cyber-espionage or sabotage of an information technology (IT) system that is produced, manufactured, or assembled by an entity owned, directed or subsidized by the People's Republic of China (PRC). JPL retains the right to reject any IT system tendered for acceptance under this Subcontract, without any further recourse by, or explanation to, the Subcontractor, if the Government determines the IT system, in whole or in part, presents an unacceptable risk to national security.
- (c) The Subcontractor shall obtain the approval of the Contracting Officer through the JPL Subcontracts Manager before acquiring any IT system(s) from entities owned, directed or subsidized by the People's Republic of China under this subcontract. Any Subcontractor request to use such items shall include adequate information for Government evaluation of the request, including—
 - (1) A brief description of the item(s); and
 - (2) Vendor/manufacturer's company name and address;
- (d) The Contracting Officer will provide the information referenced in paragraph (c) to the NASA Office of the Chief Information Officer (OCIO) which will assess the risk of cyber-espionage or sabotage and make a determination if the acquisition of such system is in the national interest. Only items so approved shall be provided under the subcontract.

PATENT AND COPYRIGHT AGREEMENT

- (a) The Subcontractor agrees to:
 - (1) Require as a prerequisite to the performance of any support Subcontract work by any employee of the Subcontractor that each of them execute the equivalent of a "Patent and Copyright Agreement" assignment (attached form JPL 1929), except those in clerical categories; and
 - (2) Notify JPL without delay and prior to the performance of any work, of the refusal of any employee of the Subcontractor, designated to perform work pursuant to this Subcontract, to execute the "Patent and Copyright Agreement," form JPL 1929 or its equivalent.
- (b) The Subcontractor hereby waives and releases, relinquishes and assigns to JPL all legal rights, including copyrights, title and interest to which it might otherwise be entitled by Subcontract or under any applicable laws, in any copyright, reportable invention, discovery, innovation, improvement, or other matter whether or not patentable, that an employee of the Subcontractor solely, or jointly with others, conceives or actually reduces to practice in the performance of work pursuant to the above-identified Subcontract. The Subcontractor agrees to require its employees who work on the Subcontract to disclose promptly and fully to the California Institute of Technology, hereinafter referred to as the Institute, or to any individual, corporation, or Governmental agency which the Institute may specify, all inventions, discoveries, innovations, improvements, and other matters, whether or not patentable, that each solely, or jointly with others, conceives or actually reduces to practice in the performance of work pursuant to the Subcontract. If requested, the Subcontractor will provide JPL with any such executed "Patent and Copyright Agreement" forms.

PROGRESS PAYMENTS

JPL will make payments to the Subcontractor when requested as work progresses, but not more frequently than monthly, in amounts of \$2,500 or more approved by JPL, under the following conditions:

- (a) Computation of Amounts.
 - (1) Unless the Subcontractor requests a smaller amount, JPL will compute each progress payment as 85% of the Subcontractor's total costs incurred under this Subcontract, whether or not actually paid, plus progress payments to lower-tier subcontractors (see Paragraph (j) below), less the sum of all previous progress payments made by JPL under this Subcontract. Cost of money that would be allowable under FAR 31.205-10 and any corresponding implementing or supplementing clauses in the NFS shall be deemed an incurred cost for progress payment purposes.

- (2) The amount of progress payments for supplies and services directly for the Subcontract are limited to the amounts that have been paid by cash, check, or other forms of payment, or that are determined due and will be paid to lower-tier subcontractors:
 - (A) In accordance with the terms and conditions of a lower-tier subcontract or invoice; and
 - (B) Ordinarily within 30 days of the submission of the Subcontractor's payment request to JPL.
 - (3) JPL will exclude accrued costs of Subcontractor contributions under employee pension until actually paid unless:
 - (A) The Subcontractor's practice is to make contributions to the retirement fund quarterly or more frequently; and
 - (B) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contributions remaining unpaid shall be excluded from the Subcontractor's total costs for progress payments until paid).
 - (4) The Subcontractor shall not include the following in total costs for progress payment purposes in Paragraph (a)(1) of this clause:
 - (A) Costs that are not reasonable, allocable to this Subcontract, and consistent with sound and generally accepted accounting principles and practices.
 - (B) Costs incurred by lower-tier subcontractors or suppliers.
 - (C) Costs ordinarily capitalized and subject to depreciation or amortization except for the properly depreciated or amortized portion of such costs.
 - (D) Payments made or amounts payable to lower-tier subcontractors or suppliers, except for:
 - (ii) Completed work, including partial deliveries, to which the Subcontractor has acquired title; and
 - (iii) Work under cost-reimbursement or time-and-material lower-tier subcontracts to which the Subcontractor has acquired title.
 - (5) The amount of unliquidated progress payments may exceed neither (i) the progress payments made against incomplete work (including allowable unliquidated progress payments to lower-tier subcontractors) nor (ii) the value, for progress payment purposes, of the incomplete work. Incomplete work shall be considered to be the supplies and services required by this Subcontract, for which delivery and invoicing by the Subcontractor and acceptance by JPL are incomplete.
 - (6) The total amount of progress payments shall not exceed 85% of the total Subcontract amount, or 85% of any current maximum liability of JPL specified in the Subcontract. If any separate Subcontract action specifies a separate limit of JPL's liability, then the total amount of progress payments for that action shall not exceed 85% of that separate limit and costs incurred for that action shall be segregated on progress payment requests and invoices.
 - (7) If a progress payment or the unliquidated progress payments exceed the amounts permitted by Paragraphs (a)(5) or (a)(6) above, the Subcontractor shall repay the amount of such excess to JPL on demand.
 - (8) Notwithstanding any other terms of the Subcontract, the Subcontractor agrees not to request progress payments in dollar amounts of less than \$2,500. JPL may make exceptions.
 - (9) The costs applicable to items delivered, invoiced, and accepted shall not include costs in excess of the subcontract price of the items.
- (b) Liquidation. Except as provided in the "Termination for Convenience" clause, all progress payments shall be liquidated by deducting from any payment under this Subcontract, other than advance or progress payments, the unliquidated progress payments, or 85% of the amount invoiced, whichever is less. The Subcontractor shall repay to JPL any amounts required by a retroactive price reduction, after computing liquidations and payments on past invoices at the reduced prices and adjusting the unliquidated progress payments accordingly. JPL

reserves the right to unilaterally change from the ordinary liquidation rate to an alternate rate when deemed appropriate for proper Subcontract financing.

- (c) Reduction or Suspension. JPL may reduce or suspend progress payments, increase the rate of liquidation, or take a combination of these actions, after finding on substantial evidence any of the following conditions:
 - (1) The Subcontractor failed to comply with any material requirement of this Subcontract (which includes Paragraphs (f) and (g) below.)
 - (2) Performance of this Subcontract is endangered by the Subcontractor's (i) failure to make progress or (ii) unsatisfactory financial condition.
 - (3) Inventory allocated to this Subcontract substantially exceeds reasonable requirements.
 - (4) The Subcontractor is delinquent in payment of the costs of performing this Subcontract in the ordinary course of business.
 - (5) The fair value of the undelivered work is less than the amount of unliquidated progress payments for that work. .
 - (6) The Subcontractor is realizing less profit than that reflected in the establishment of any alternate liquidation rate in Paragraph (b) above, and that rate is less than the progress payment rate stated in Paragraph (a)(1) above.
- (d) Title.
 - (1) Title to the property described in this Paragraph (d) shall vest in the Government. Vestiture shall be immediately upon the date of this Subcontract, for property acquired or produced before that date. Otherwise, vestiture shall occur when the property is or should have been allocable or properly chargeable to this Subcontract.
 - (2) "Property," as used in this clause, includes all of the below-described items acquired or produced by the Subcontractor that are or should be allocable or properly chargeable to this Subcontract under sound and generally accepted accounting principles and practices.
 - (A) Parts, materials, inventories, and work in process;
 - (B) Special tooling and special test equipment to which the Government is to acquire title
 - (C) Nondurable (i.e., noncapital) tools, jigs, dies, fixtures, molds, patterns, taps, gauges, test equipment, and other similar manufacturing aids, title to which would not be obtained as special tooling under Paragraph (2)(B) above; and
 - (D) Drawings and technical data, to the extent the Subcontractor or lower-tier subcontractors are required to deliver them to JPL by other clauses of this Subcontract.
 - (3) Although title to property is in the Government under this clause, other applicable clauses of this Subcontract shall determine the handling and disposition of the property.
 - (4) The Subcontractor may sell any scrap resulting from production under this Subcontract without requesting JPL's approval, but the proceeds shall be credited against the costs of performance.
 - (5) To acquire for its own use or dispose of property to which title is vested in the Government under this clause, the Subcontractor must obtain JPL's advance approval of the action and the terms. The Subcontractor shall (i) exclude the allocable costs of the property from the costs of Subcontract performance, and (ii) repay to JPL any amount of unliquidated progress payments allocable to the property. Repayment may be by cash or credit memorandum.
 - (6) When the Subcontractor completes all of the obligations under this Subcontract, including liquidation of all progress payments, title shall vest in the Subcontractor for all property (or the proceeds thereof) not:
 - (A) Delivered to, and accepted by, JPL under this Subcontract; or

- (B) Incorporated in supplies delivered to, and accepted by, JPL under this Subcontract and to which title is vested in the Government under this clause.
- (7) The terms of this Subcontract concerning liability for Government-furnished property shall not apply to property to which the Government acquired title solely under this clause .
- (e) Risk of Loss. Before delivery to and acceptance by JPL, the Subcontractor shall bear the risk of loss for property, the title to which vests in the Government under this clause, except to the extent JPL expressly assumes the risk. The Subcontractor shall repay JPL an amount equal to the unliquidated progress payments that are based on costs allocable to property that is lost (see 45.101).
- (f) Control of Costs and Property. The Subcontractor shall maintain an accounting system and controls adequate for the proper administration of this clause.
- (g) Reports and Access to Records.
 - (1) The Subcontractor shall promptly furnish reports, certificates, financial statements, and other pertinent information (including estimates to complete) reasonably requested by the Government or JPL for the administration of this clause . Also, the Subcontractor shall give the Government or JPL reasonable opportunity to examine and verify the Subcontractor's books, records, and accounts.
 - (2) The Subcontractor shall furnish estimates to complete that have been developed or updated within six months of the date of the progress payment request. The estimates to complete shall represent the Subcontractor's best estimate of total costs to complete all remaining subcontract work required under the subcontract. The estimates shall include sufficient detail to permit JPL verification.
 - (3) Each Subcontractor request for progress payment shall:
 - (A) Be submitted on Standard Form 1443, Contractor's Request for Progress Payment, or equivalent, in accordance with the form instructions and the subcontract contract terms; and
 - (B) Include any additional supporting documentation requested by the Subcontracts Manager.
- (h) Special Terms Regarding Default. If this Subcontract is terminated under the "Default" clause , (i) the Subcontractor shall, on demand, repay to JPL the amount of unliquidated progress payments and (ii) title shall vest in the Subcontractor, on full liquidation of progress payments, for all property for which JPL elects not to require delivery under the "Default" clause . JPL shall be liable for no payment except as provided by the "Default" clause.
- (i) Reservations of Rights.
 - (1) No payment or vesting of title under this clause shall (i) excuse the Subcontractor from performance of obligations under this Subcontract or (ii) constitute a waiver of any of the rights or remedies of the parties under the Subcontract.
 - (2) JPL's rights and remedies under this clause (i) shall not be exclusive but rather shall be in addition to any other rights and remedies provided by law or this Subcontract and (ii) shall not be affected by delayed, partial, or omitted exercise of any right, remedy, power, or privilege, nor shall such exercise or any single exercise preclude or impair any further exercise under this clause or the exercise of any other right, power, or privilege of JPL.
- (j) Progress Payments to lower-tier subcontractors. The progress payments to lower-tier subcontractors mentioned in (a)(1) and (a) (2) above shall be all progress payments to lower-tier subcontractors or divisions, if the following conditions are met:
 - (1) The amounts included are limited to (a) the unliquidated remainder of progress payments made plus (b) any unpaid lower-tier subcontractor requests for progress payments.
 - (2) The lower-tier subcontract or interdivisional order is expected to involve a minimum of approximately six months between the beginning of work and the first delivery, or, if the lower-tier subcontractor is a small business concern, four months.
 - (3) The terms of the lower-tier subcontract or interdivisional order concerning progress payments:

- (A) Are substantially similar to the terms in FAR 52.232-16 and any corresponding implementing or supplementing clauses in the NFS for any Lower-tier subcontractor that is a large business concern, or that clause with its Alternate I for any lower -tier subcontractor that is a small business concern;
 - (B) Are at least as favorable to JPL as the terms of this clause ;
 - (C) Are not more favorable to the lower-tier subcontractor or division than the terms of this clause are to the Subcontractor;
 - (D) Are in conformance with the requirements of FAR Paragraph 32.504(e) and any corresponding implementing or supplementing clauses in the NFS; and
 - (E) Subordinate all lower-tier subcontractor rights concerning property to which the Government has title under the lower-tier Subcontract to JPL's right to require delivery of the property to JPL if (i) the Subcontractor defaults, or (ii) the lower-tier subcontractor becomes bankrupt or insolvent.
- (4) The progress payment rate in the lower-tier Subcontract is the customary rate used by NASA, depending on whether the lower-tier subcontractor is or is not a small business concern.
 - (5) The parties agree concerning any proceeds received by JPL for property to which title has vested in the Government under the lower-tier subcontract terms, that the proceeds shall be applied to reducing any unliquidated progress payments by JPL to the Subcontractor under this Subcontract.
 - (6) If no unliquidated progress payments to the Subcontractor remain, but there are unliquidated progress payments that the Subcontractor has made to any lower-tier subcontractor, the Subcontractor shall be subrogated to all the rights JPL obtained through the terms required by this clause to be in any lower-tier subcontract, as if all such rights had been transferred to the Subcontractor.
 - (7) To facilitate small business participation in lower-tier subcontracting under this subcontract, the Subcontractor agrees to provide progress payments to small business concerns, in conformity with the standards for customary progress payments stated in FAR Subpart 32.5 and any corresponding implementing or supplementing clauses in the NFS. The Subcontractor shall not consider the need for such financing payments as a handicap or adverse factor in the award of lower-tier subcontracts.

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| PROGRESS PAYMENTS – SMALL BUSINESS |
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JPL will make payments to the Subcontractor when requested as work progresses, but not more frequently than monthly, in amounts of \$2,500 or more approved by JPL, under the following conditions:

- (a) Computation of Amounts.
 - (1) Unless the Subcontractor requests a smaller amount, JPL will compute each progress payment as 90% of the Subcontractor's total costs incurred under this Subcontract, whether or not actually paid, plus progress payments to lower-tier subcontractors (see Paragraph (j) below), less the sum of all previous progress payments made by the JPL under this Subcontract. Cost of money that would be allowable under FAR 31.205-10 and any corresponding implementing or supplementing clauses in the NFS shall be deemed an incurred cost for progress payment purposes.
 - (2) The amount of progress payments for supplies and services directly for the Subcontract are limited to the amounts that have been paid by cash, check, or other forms of payment, or that are determined due and will be paid to lower-tier subcontractors:
 - (A) In accordance with the terms and conditions of a lower-tier subcontract or invoice; and
 - (B) Ordinarily within 30 days of the submission of the Subcontractor's payment request to JPL.
 - (3) Accrued costs of Subcontractor contributions under employee pension plans shall be excluded until actually paid unless:
 - (A) The Subcontractor's practice is to contribute to the retirement fund quarterly or more frequently; and

- (B) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contributions remaining unpaid shall be excluded from the Subcontractor's total costs for progress payments until paid).
- (4) The Subcontractor shall not include the following in total costs for progress payment purposes in Paragraph (a)(1) of this clause:
 - (A) Costs that are not reasonable, allocable to this Subcontract, and consistent with sound and generally accepted accounting principles and practices.
 - (B) Costs incurred by lower-tier subcontractors or suppliers.
 - (C) Costs ordinarily capitalized and subject to depreciation or amortization except for the properly depreciated or amortized portion of such costs.
 - (D) Payments made or amounts payable to lower-tier subcontractors or suppliers, except for:
 - (i) Completed work, including partial deliveries, to which the Subcontractor has acquired title; and
 - (ii) Work under cost-reimbursement or time-and-material lower-tier subcontracts to which the Subcontractor has acquired title.
- (5) The amount of unliquidated progress payments may exceed neither (i) the progress payments made against incomplete work (including allowable unliquidated progress payments to lower-tier subcontractors) nor (ii) the value, for progress payment purposes, of the incomplete work. Incomplete work shall be considered to be the supplies and services required by this Subcontract, for which delivery and invoicing by the Subcontractor and acceptance by JPL are incomplete.
- (6) The total amount of progress payments shall not exceed 90% of the total Subcontract amount, or 90% of any current maximum liability of the JPL specified in the Subcontract. If any separate Subcontract action specifies a separate limit of the JPL's liability, then the total amount of progress payments for that action shall not exceed 90% of that separate limit and costs incurred for that action shall be segregated on progress payment requests and invoices.
- (7) If a progress payment or the unliquidated progress payments exceed the amounts permitted by Paragraphs (a) (5) or (a) (6) above, the Subcontractor shall repay the amount of such excess to JPL on demand.
- (8) Notwithstanding any other terms of the Subcontract, the Subcontractor agrees not to request progress payments in dollar amounts of less than \$2,500. JPL may make exceptions.
- (b) Liquidation. Except as provided in the "Termination for Convenience" Clause, all progress payments shall be liquidated by deducting from any payment under this Subcontract, other than advance or progress payments, the unliquidated progress payments, or 90% of the amount invoiced, whichever is less. The Subcontractor shall repay to JPL any amounts required by a retroactive price reduction, after computing liquidations and payments on past invoices at the reduced prices and adjusting the unliquidated progress payments accordingly. JPL reserves the right to unilaterally change from the ordinary liquidation rate to an alternate rate when deemed appropriate for proper Subcontract financing.
- (c) Reduction or Suspension. JPL may reduce or suspend progress payments, increase the rate of liquidation, or take a combination of these actions, after finding on substantial evidence any of the following conditions:
 - (1) The Subcontractor failed to comply with any material requirement of this Subcontract (which includes Paragraphs (f) and (g) below.)
 - (2) Performance of this Subcontract is endangered by the Subcontractor's (i) failure to make progress or (ii) unsatisfactory financial condition.
 - (3) Inventory allocated to this Subcontract substantially exceeds reasonable requirements.
 - (4) The Subcontractor is delinquent in payment of the costs of performing this Subcontract in the ordinary course of business.

- (5) The fair value of the undelivered work is less than the amount of unliquidated progress payments for that Work. The Subcontractor is realizing less profit than that reflected in the establishment of any alternate liquidation rate in Paragraph (b) above, and that rate is less than the progress payment rate stated in Paragraph (a)(1) above.

(d) Title.

- (1) Title to the property described in this Paragraph (d) shall vest in the Government. Vestiture shall be immediately upon the date of this Subcontract, for property acquired or produced before that date. Otherwise, vestiture shall occur when the property is or should have been allocable or properly chargeable to this Subcontract.
 - (2) "Property," as used in this clause, includes all of the below described items acquired or produced by the Subcontractor that are or should be allocable or properly chargeable to this Subcontract under sound and generally accepted accounting principles and practices.
 - (A) Parts, materials, inventories, and work in process;
 - (B) Special tooling and special test equipment to which the Government is to acquire title;
 - (C) Nondurable (i.e., noncapital) tools, jigs, dies, fixtures, molds, patterns, taps, gauges, test equipment, and other similar manufacturing aids, title to which would not be obtained as special tooling under Paragraph (d)(2)(B) above; and
 - (D) Drawings and technical data, to the extent the Subcontractor or lower-tier subcontractors are required to deliver them to JPL by other clauses of this Subcontract.
 - (3) Although title to property is in the Government under this clause, other applicable clauses of this Subcontract shall determine the handling and disposition of the property.
 - (4) The Subcontractor may sell any scrap resulting from production under this Subcontract without requesting JPL's approval, but the proceeds shall be credited against the costs of performance.
 - (5) To acquire for its own use or dispose of property to which title is vested in the Government under this clause, the Subcontractor must obtain JPL's advance approval of the action and the terms. The Subcontractor shall (i) exclude the allocable costs of the property from the costs of Subcontract performance, and (ii) repay to JPL any amount of unliquidated progress payments allocable to the property. Repayment may be by cash or credit memorandum.
 - (6) When the Subcontractor completes all of the obligations under this Subcontract, including liquidation of all progress payments, title shall vest in the Subcontractor for all property (or the proceeds thereof) not:
 - (A) Delivered to, and accepted by, JPL under this Subcontract; or
 - (B) Incorporated in supplies delivered to, and accepted by, JPL under this Subcontract and to which title is vested in the Government under this clause.
 - (7) The terms of this Subcontract concerning liability for Government-furnished property shall not apply to property to which the Government acquired title solely under this clause.
- (e) Risk of Loss. Before delivery to and acceptance by JPL, the Subcontractor shall bear the risk of loss for property, the title to which vests in the Government under this Clause, except to the extent JPL expressly assumes the risk. The Subcontractor shall repay JPL an amount equal to the unliquidated progress payments that are based on costs allocable to property that is lost.
- (f) Control of Costs and Property. The Subcontractor shall maintain an accounting system and controls adequate for the proper administration of this clause.
- (g) Reports, Forms, and Access to Records.
- (1) The Subcontractor shall promptly furnish reports, certificates, financial statements, and other pertinent information (including estimates to complete) reasonably requested by the Government or JPL for the

administration of this clause. Also, the Subcontractor shall give the Government or JPL reasonable opportunity to examine and verify the Subcontractor's books, records, and accounts.

- (2) The Subcontractor shall furnish estimates to complete that have been developed or updated within six months of the date of the progress payment request. The estimates to complete shall represent the Subcontractor's best estimate of total costs to complete all remaining subcontract work required under the subcontract. The estimates shall include sufficient detail to permit JPL or Government verification.
- (3) Each Subcontractor request for progress payment shall:
 - (A) Be submitted on Standard Form 1443, Contractor's Request for Progress Payment, or equivalent in accordance with the form instructions and the subcontract terms; and
 - (B) Include any additional supporting documentation requested by the Subcontracts Manager.
- (h) Special Terms Regarding Default. If this Subcontract is terminated under the "Default" clause, (i) the Subcontractor shall, on demand, repay to JPL the amount of unliquidated progress payments and (ii) title shall vest in the Subcontractor, on full liquidation of progress payments, for all property for which JPL elects not to require delivery under the "Default" clause. JPL shall be liable for no payment except as provided by the "Default" clause.
- (i) Reservations of Rights.
 - (1) No payment or vesting of title under this clause shall (i) excuse the Subcontractor from performance of obligations under this Subcontract or (ii) constitute a waiver of any of the rights or remedies of the parties under the Subcontract.
 - (2) JPL's rights and remedies under this clause (i) shall not be exclusive but rather shall be in addition to any other rights and remedies provided by law or this Subcontract and (ii) shall not be affected by delayed, partial, or omitted exercise of any right, remedy, power, or privilege, nor shall such exercise or any single exercise preclude or impair any further exercise under this clause or the exercise of any other right, power, or privilege of JPL.
- (j) Progress Payments to lower-tier subcontractors. The progress payments mentioned in (a) (1) and (a) (2) above shall be all progress payments to lower-tier subcontractors or divisions, if the following conditions are met:
 - (1) The amounts included are limited to (A) the unliquidated remainder of progress payments made plus (B) any unpaid lower-tier subcontractor requests for progress payments.
 - (2) The lower-tier subcontract or interdivisional order is expected to involve a minimum of approximately six months between the beginning of work and the first delivery, or, if the lower-tier subcontractor is a small business concern, four months.
 - (3) The terms of the subcontract or interdivisional order concerning progress payments:
 - (A) Are substantially similar to the terms in FAR 52.232-16 and any corresponding implementing or supplementing clauses in the NFS for any lower-tier subcontractor that is a large business concern, or that clause with its Alternate I for any lower-tier subcontractor that is a small business concern;
 - (B) Are at least as favorable to JPL as the terms of this clause;
 - (C) Are not more favorable to the lower-tier subcontractor or division than the terms of this clause are to the Subcontractor;
 - (D) Are in conformance with the requirements of FAR Paragraph 32.504(e) and any corresponding implementing or supplementing clauses in the NFS; and
 - (E) Subordinate all lower-tier subcontractor rights concerning property to which the Government has title under the lower-tier subcontract to JPL's right to require delivery of the property to JPL if (i) the Subcontractor defaults, or (ii) the lower-tier subcontractor becomes bankrupt or insolvent.
 - (4) The progress payment rate in the lower-tier subcontract is the customary rate used by NASA, depending on whether the lower-tier subcontractor is or is not a small business concern.

- (5) The parties agree concerning any proceeds received by the JPL for property to which title has vested in the Government under the lower-tier Subcontract terms, that the proceeds shall be applied to reducing any unliquidated progress payments by JPL to the Subcontractor under this Subcontract.
- (6) If no unliquidated progress payments to the Subcontractor remain, but there are unliquidated progress payments that the Subcontractor has made to any lower-tier Subcontractor, the Subcontractor shall be subrogated to all the rights the JPL obtained through the terms required by this clause to be in any lower-tier Subcontract, as if all such rights had been transferred to the Subcontractor.
- (7) To facilitate small business participation in lower-tier subcontracting under this Subcontract, the Subcontractor agrees to provide progress payments to small business concerns, in conformity with the standards for customary progress payments stated in FAR Subpart 32.113 and FAR 32.5, and any corresponding implementing or supplementing clauses in the NFS. The Subcontractor shall not consider the need for such financing payments as a handicap or adverse factor in the award of lower-tier subcontracts.

SAFETY AND HEALTH

(This clause is applicable when one or more of the following conditions exist: (i) the work will be conducted completely or partly on premises owned or controlled by the Government, (ii) the work includes construction, alteration or repair of facilities in excess of \$150,000, (iii) the work, regardless of place of performance, that involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Subcontractor employees working on NASA Subcontracts) or high value equipment or property and the hazards are not adequately addressed by Occupational Safety and Health (OSHA) or Department of Transportation (DOT) regulations (if applicable) or (iv) when JPL determines that the assessed risk and consequences of a failure to properly manage and control the hazard(s) warrants use of the clause.)

- (a) The Subcontractor shall take safety and occupational health measures as provided in this clause and JPL Form 2885 in performing under this Subcontract and shall, to the extent set forth below, submit a safety plan and health plan (applicable to the work to be performed under this Subcontract) for JPL's approval, prior to subcontract execution. The Subcontractor shall comply with all Federal, State, and local laws applicable to safety and occupational health in effect on the date of this Subcontract and with the safety and occupational health standards, specifications, reporting requirements, and clauses set forth below.
- (b) The Subcontractor shall take or cause to be taken any other safety and occupational health measures JPL may reasonably direct. To the extent that the Subcontractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this Subcontract, the equitable adjustment shall be determined pursuant to the procedures of the clause of this Subcontract entitled "Changes," provided, that no adjustment shall be made under this Safety and Health clause for any change for which an equitable adjustment is expressly provided under any other clause of the Subcontract.
- (c) Standards. The following safety and health standards, specifications, issuances, and reporting requirements are prescribed pursuant to paragraph (a).
 - (1) General Standards and Specifications: the Subcontractor shall use NASA Procedural Requirements (NPR) 8715.3C NASA General Safety Program Requirements dated 03/12/ 2008 (w/ Change 7 dated 02/25/2011) as a general policy guide to establish a safety program to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
 - (2) Nuclear Safety: Radioactive material will be handled in accordance with appropriate Federal, State, local and regulations and requirements, to specifically include those of the State of California, Department of Energy and/or Nuclear Regulatory Commission. Launching of nuclear materials into space shall be done in accordance with National Security Council/Presidential Directive 25, as of 05/08/1996.
 - (3) Propulsion Safety: The Subcontractor shall comply with all applicable Federal, State, and local requirements applicable to propulsion safety, and the requirements shall be used to establish a propulsion safety program (if applicable) to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
 - (4) Fire Safety: The Subcontractor shall comply with all applicable Federal, State, and Local requirements pertaining to Fire Protection and Life Safety. NASA STD 8719.11A, NASA Safety Standard for Fire Protection and Life Safety, dated 11/19/2008, will be followed to ensure safety of NASA facilities.

- (5) Ammunition and Explosive Safety: The Subcontractor shall comply with all applicable Federal, State, and local requirements applicable to ammunition and explosive safety. The requirements of NASA-STD-8719.12 Safety Standard for Explosives, Propellants and Pyrotechnics, dated 01/2010, shall be used to establish an ammunition and explosive safety program to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
 - (6) Pressure Vessel and Pressure System Safety: The Subcontractor shall establish a pressure systems safety and recertification program in accordance with NASA-STD 8719.17A NASA Requirements for Ground-Based Pressure Vessels and Pressurized Systems (PVS) dated 11/06/2009 and NPD 8710.5 Policy for Pressure Vessels and Pressurized Systems dated 03/12/2008.
 - (7) Any additional safety and health standards, specifications, issuances and reporting requirements set forth in this Subcontract.
- (d) The safety and health plan to be submitted by the Subcontractor pursuant to paragraph (a) above shall implement the requirements of this clause and of the standards and specifications of paragraph (c) of this clause and shall describe the means to be employed by the Subcontractor to monitor and enforce said requirements. The plan shall include the Subcontractor's standards and criteria for imposing safety and health standards upon its Lower-tier Subcontractors and its plans and procedures for monitoring compliance with such standards. A safety and health plan for similar work performed by the Subcontractor on a Federal Subcontract may be submitted for review and approval under this clause.
- (e) Illness, Incident, and Injury Experience Reports.
- Reports required by this clause or elsewhere in this Subcontract shall be furnished in three copies unless otherwise specified. Subcontractor shall refer to JPL Form 2885 for detail regarding reporting requirements.
- (1) Mishap Reports: The Subcontractor shall furnish JPL mishap reports and respond to JPL requests for mishap reviews. The Subcontractor shall conduct its own mishap investigations consistent with NPR 8621.1B, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating and Recordkeeping w/ Change 5 (03/15/2010) dated 05/23/2006 with the understanding that all references to NASA in that policy shall be interpreted to mean the Subcontractor. The Subcontractor shall utilize the NPR 8621.1B, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating and Recordkeeping w/ Change5 (03/15/2010) dated 05/23/2006 as guidelines. The Subcontractor shall also report to the JPL Subcontract Manager any incidents that may have visibility in the press, mission failures, or mission anomalies that will have high JPL or NASA visibility in the press.
 - (2) The Subcontractor shall furnish such other reports as JPL determines to be related to the Subcontractor's safety and health program and its experiences thereunder.
- (f)
- (1) JPL may notify the Subcontractor in writing of any noncompliance with this clause and specify corrective actions to be taken. The Subcontractor shall promptly take and report any necessary corrective action.
 - (2) When the JPL Subcontracts Manager becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including Subcontractor employees working on NASA Subcontracts) or high value mission critical equipment or property, the JPL Subcontract Manager shall notify the Subcontractor orally, and follow with written confirmation. The Subcontractor shall promptly take and report any necessary corrective action. If the Subcontractor fails or refuses to institute prompt corrective action in accordance with subparagraph (f)(1) of this Clause, JPL may invoke the stop work order clause of this Subcontract or any other remedy legally available to JPL in the event of such failure or refusal.
- (g) The Subcontractor (or Lower-tier Subcontractor or supplier) shall cause the substance of this clause, including this paragraph (g) and any applicable clauses of this Subcontract, with any appropriate changes of designations of the parties, to be inserted in Lower-tier Subcontracts of every tier which involve work to which this clause is applicable as specified in the preamble above.
- (h) The Subcontractor agrees that authorized representatives of JPL or the Contracting Officer shall have access to and the right to examine the sites or areas where work under this Subcontract is being performed in order to determine the adequacy of the Subcontractor's safety and health measures under this clause.

SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES

- (a) The Subcontractor shall protect the confidentiality, integrity, and availability of NASA and JPL Information and Information Technology (IT) resources, as well as protect NASA and JPL Information from unauthorized disclosure. In particular, the Subcontractor shall be responsible for the IT security of all Subcontractor systems connecting to JPL's internal, non-public network, regardless of location.
- (b) This clause is applicable to all JPL subcontractors and lower-tier subcontractors if:
 - (1) The Subcontractor has any presence on JPL's non-public, unclassified internal network (intranet). This presence occurs when Subcontractor equipment accesses the JPL intranet by Ethernet cable, JPL's Wireless Network Access service (<https://jplnet.jpl.nasa.gov/wifi/>), or JPL's Remote Access service (<https://ras.jpl.nasa.gov/>); or
 - (2) The Subcontractor generates, stores, processes, or exchanges unclassified electronic information, to include Controlled Unclassified Information (CUI), for NASA or JPL in support of NASA's missions, programs, projects and/or institutional requirements, regardless of whether the information resides on a NASA, JPL, or subcontractor information system.

The applicable requirements are stated in Paragraph (e) below.

(c) Definitions.

- (1) **IT resources** means any hardware or software or interconnected system or subsystem of equipment, that is used to process, manage, access, or store NASA or JPL electronic information.
 - (2) **NASA or JPL Electronic Information** is any data (as defined in the Rights in Data clause of this Subcontract) or information (including information incidental to contract administration, such as financial, administrative, cost or pricing, or management information) that is processed, managed, accessed or stored on a NASA or JPL IT system(s) in the performance of this subcontract.
 - (3) **IT Security Plan** is specific to the IT System and not the Subcontract. The Subcontractor shall develop IT System Security Plans per the requirements stated in paragraph (e) below. All Subcontractor personnel requiring physical or logical access to NASA or JPL IT resources must complete NASA's annual IT Security Awareness training or JPL's annual IT Security Awareness training, which is based on NASA's annual IT Security Awareness Training and industry resources, and is supplemented by JPL-specific needs. JPL IT security training is located at <http://itet.jpl.nasa.gov/>.
 - (4) **Controlled Unclassified Information (CUI)**- The Controlled Unclassified Information (CUI) standardizes the way the Executive branch handles information that requires protection and that is not classified. On November 4, 2010, President Obama signed Executive Order 13556 "Controlled Unclassified Information", which establishes a program for managing this information. The categories are listed at <http://www.archives.gov/cui/registry/category-list.html#categories>.
- (d) The Subcontractor shall afford Government and JPL access to the Subcontractor's and lower-tier subcontractors' facilities, installations, operations, documentation, information contained in databases and personnel used in performance of the Subcontract. Access shall be provided to the extent required to carry out a program of IT inspection (to include results of vulnerability testing), investigation and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA or JPL Electronic Information or to the function of IT systems operated on behalf of NASA, and to preserve evidence of computer crime.

(e) Requirements:

- (1) The Subcontractor shall establish procedures, roles, and responsibilities to implement the specified areas of IT Security.
- (2) The Subcontractor shall protect the confidentiality, integrity, and availability of Subcontractor information systems in a manner commensurate with their sensitivity, value, and criticality by:
 - (A) Communicating security responsibilities documented in approved security plans and in rules of behavior according to whichever of the following three (3) circumstances applies:

- (i) Subcontractor has a persistent presence on JPL's unclassified, non-public, internal network (intranet). Persistent presence means access to JPL's intranet is obtained through a direct wired or wireless connection, as opposed to being provided via JPL's Remote Access service (<https://ras.jpl.nasa.gov>).

Action needed: All affected Subcontractor assets must be identified in the IT Security Database (ITSDB) (<https://secdb.jpl.nasa.gov/itsdb/>) and included in an authorized ITSDB security plan.

- (ii) Subcontractor does not have a persistent presence on JPL's intranet

Action needed: Any of the following three options can be used to demonstrate compliance, and this compliance must be demonstrated annually.

- Subcontractor provides a certificate issued by a United States Government entity (e.g., GSA) whose scope includes the assets that will support this subcontract

Or,

- Subcontractor completes all of the following templates provided by the National Institute of Standards and Technology (NIST) that address risk assessment, security planning, business impact analysis, and contingency planning
 - Appendix K from Guide for Conducting Risk Assessments (http://csrc.nist.gov/publications/nistpubs/800-30-rev1/sp800_30_r1.pdf)
 - Appendix A from Guide for Developing Security Plans for Federal Information Systems (<http://csrc.nist.gov/publications/nistpubs/800-18-Rev1/sp800-18-Rev1-final.pdf>)
 - Appendix A from Contingency Planning Guide for Federal Information Systems (http://csrc.nist.gov/publications/nistpubs/800-34-rev1/sp800-34-rev1_errata-Nov11-2010.pdf)
 - Appendix B from Contingency Planning Guide for Federal Information Systems (http://csrc.nist.gov/publications/nistpubs/800-34-rev1/sp800-34-rev1_errata-Nov11-2010.pdf)

Or,

- Subcontractor completes a template provided by JPL OCIO that addresses basic aspects of IT security, located at <https://itsec.jpl.nasa.gov/vendor.php> (then click on "JPL_AGP_Cyber_Review_Template_Rev_41.xlsx")

- (iii) Subcontractor is providing a commodity service or product

Action needed: Subcontractor demonstrates compliance by

- Providing a certificate issued by a United States Government entity (e.g., GSA) for the service or product, or
- Appearing on an OCIO-approved list, or
- Agreeing to JPL's modifications to the Subcontractor's standard subcontract

- (B) Assessing and documenting risk through the identification of potential threats and vulnerabilities, while considering the sensitivity of the information being protected;
- (C) Ensuring the security of information systems and services when they are developed, acquired, or when software is installed by users;
- (D) Ensuring users receive the training necessary to perform their functions in a secure manner;
- (E) Managing the security impact of changes to information system configurations;
- (F) Ensuring the availability of resources by limiting the impact of disruptive events through the development of contingency plans, role-specific training, periodic contingency plan testing and updates;
- (G) Minimizing the impact of security incidents through training, testing, timely detection, and mitigation;
- (H) Reducing the security risks associated with maintenance activities by managing and documenting when, how, and by whom information systems are maintained;

- (I) Ensuring that information system media are protected against unauthorized access when transported or stored, and by sanitizing media before being discarded or released for reuse;
 - (J) Ensuring that only authorized personnel are granted access to facilities housing information systems and their distribution and transmission lines; and mitigating the risk of environmental hazards through emergency systems and the use of alternate work locations;
 - (K) Ensuring that personnel who require access to Subcontractor information systems have been screened consistent with the risk designation of their position;
 - (L) Protecting the integrity of software and data by detecting and correcting security flaws;
 - (M) Preventing unauthorized use of Subcontractor information systems by providing managed and secure access;
 - (N) Ensuring that sufficient information is captured to reconstruct security-related events through creation, review, and retention of audit and accountability records;
 - (O) Ensuring that access to non-public Subcontractor information systems will be provided only to verified users and devices; and –
 - (P) Protecting stored, processed, or transmitted information by implementing secure communications, and separation of system services.
- (f) The Subcontractor shall provide via mutually agreed-upon formats, all information required to assist NASA and JPL in their Federal Information Security Management Act (FISMA) reporting responsibilities.
 - (g) The Subcontractor shall report any suspected IT security incidents that involve NASA or JPL data, systems, or networks by calling the JPL Unified Service Desk at 818-354-4357 and collaborate with JPL OCIO and NASA SOC in the investigation and resolution of IT security incidents
 - (h) The Subcontractor shall insert this clause, including this paragraph in all lower-tier subcontracts that process, manage, access or store NASA or JPL Electronic Information in support of the mission of the Agency.
 - (i) The Subcontractor certifies that it shall comply with the requirements set forth in this clause within 90 days of subcontract execution.

SECTION B

The Federal Acquisition Regulation (FAR) and NASA FAR Supplement (NFS) clauses below are incorporated by reference with the same force and effect as if they were given in full text

The FAR/NFS clauses listed below shall be suitably revised to identify the contracting and other parties to address the proper intent of the clause, except as shown in the notes associated with the clause. The following guidelines help illustrate:

- “contract” means “subcontract”
- “contractor” means “subcontractor”
- “subcontract” means “lower-tier subcontract”
- “subcontractor” means “lower-tier subcontractor”
- “Contracting Officer” means “JPL Subcontracts Manager”
- “Government” means “JPL”

As an exception to the above, the terms “Government” and “Contracting Officer” do not change when a right, act, authorization or obligation can be granted or performed only by the Government or Contracting Officer or his/her duly-authorized representative.

Unless otherwise noted below, the following terms are to remain unchanged: “U.S.,” United States,” “U.S. Government,” “United States Government,” “Federal,” and “Federal Government”

| FAR and NFS Clauses Incorporated into this Subcontract by Reference (all references are FAR Clauses, unless preceded by “NFS”) | |
|---|---|
| Reference | Title and Date |
| Applicable for all Subcontract Dollar Values | |
| 52.204-2 | Security Requirements (Aug 1996) <i>Note 1: ALT I (Apr 1984) applies when research and development with an educational institution is contemplated</i> |
| 52.204-9 | Personal Identity Verification of Contractor Personnel (Jan 2011) <i>Note 1: “Government” means “Government”</i> |
| 52.208-8 | Required Sources for Helium and Helium Usage Data (Apr 2002) |
| 52.223-5 | Pollution Prevention and Right-to-Know Information (May 2011) <i>Note 1: ALT 1 (May 2011) applies</i> <i>Note 2: ALT 2 (May 2011) applies</i> |
| 52.223-16 | IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (Dec 2007) |
| 52.224-1 | Privacy Act Notification (Apr 1984) |
| 52.224-2 | Privacy Act (Apr 1984) |
| 52.225-8 | Duty-Free Entry (Oct 2010) <i>Note 1: In Paragraph (g)(2), replace “Government prime contract number” with “NNN12AA01C”;</i> <i>Note 2: In Paragraph (g)(4) :</i> <i>-Replace “agency” with “NASA”;</i> <i>-Insert applicable item numbers from the tariff Schedule; and</i> <i>-Replace “cognizant contract administration office” with “Subcontracts Manager”</i> |
| 52.227-10 | Filing of Patent Applications- Classified Subject Matter (Dec 2007) <i>Note 1: “Government” means “Government through the JPL Subcontracts Manager”</i> |
| 52.227-11 | Patent Rights—Ownership by the Contractor (Dec 2007) <i>Note 1: “Government” means “Government”</i> <i>Note 2: “Contracting Officer” means “Contracting Officer through the JPL Subcontract Manager”</i> |

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|---------------------|---|
| | <p><i>Note 3: ALT III (June 1989) applies to subcontracts with nonprofit organizations for the operation of a Government-owned facility</i></p> <p><i>Note 4: ALT IV (June 1989) applies to subcontracts for the operation of a Government-owned facility</i></p> |
| 52.227-17 | <p>Rights in Data- Special Works (Dec 2007)</p> <p><i>Note 1: "Government" means Government</i></p> <p><i>Note 2: "Contracting Officer" means "Contracting Officer through JPL"</i></p> |
| 52.227-18 | <p>Rights in Data- Existing Works (Dec 2007)</p> <p><i>Note 1: "Government" means Government</i></p> <p><i>Note 2: "Contracting Officer" means "Contracting Officer through JPL"</i></p> |
| 52.227-21 | <p>Technical Data Declaration, Revision, and Withholding of Payment—Major Systems (Dec 2007)</p> <p><i>Note 1: Applies in in all subcontracts for a "major system" as that term is defined in 41 U.S.C.A. 403</i></p> |
| 52.229-8 | <p>Taxes- Foreign Cost-Reimbursement Contract (Mar 1990)</p> <p><i>Note 1: Applies when the subcontract is to be performed wholly or partly in a foreign country, unless it is contemplated that the contract will be with a foreign government.</i></p> <p><i>Note 2: There are two blanks in paragraph (a). If this AGP is applicable to the subcontract, delete this highlighted portion and then indicate here: (i) for the first blank of paragraph (a) the name of the foreign government, and (ii) for the second blank in paragraph (a) the name of the country.</i></p> |
| 52.236-22 | Design Within Funding Limitations (Apr 1984) |
| 52.237-3 | Continuity of Services (Jan 1991) |
| 52.245-1 | <p>Government Property (Apr 2012)</p> <p><i>Note 1: "Government" is unchanged in the phrases "Government Property," "Government-furnished," "Government-furnished property," "Government Material," & "Government-owned."</i></p> <p><i>Note 2: "Government" means "Government" in the following: ¶ (a), (e)(1), (e)(2) (first occurrence), (e)(3)(i), (e)(3)(ii)(first occurrence), (f)(2), (j)(except (j)(6)(i), & (m).</i></p> <p><i>Note 3: "Government" means "JPL and the Government" in the following: ¶ (g), (h), (j)(6)(i), & (k)(4).</i></p> <p><i>Note 4: ¶ (a) - "agency" means "JPL."</i></p> <p><i>Note 5: "Termination Contracting Officer" means "JPL Subcontracts Manager."</i></p> <p><i>Note 6: "Government means "Government through JPL" in ¶ (k)(1), (2) & (3).</i></p> <p><i>Note 7: "Government contract" means "Government contract or subcontract" in ¶ (j)(6)(i).</i></p> |
| 52.247-68 | Report of Shipment (Feb 2006) |
| NFS: 1852.227-70 | <p>New Technology (May 2002)</p> <p><i>Note 1: "Government" means "Government"</i></p> <p><i>Note 2: "Contracting Officer" means "Contracting Officer through the JPL Subcontracts Manager"</i></p> <p><i>Note 3: See the clause "Designation of New Technology and Patent Rights Representative" to submit to NASA reportable items, disclosure of subject inventions, interim reports, final reports, utilization reports, and other required reports. A copy must be submitted to the Subcontracts Manager.</i></p> |
| NFS: 1852.223-71 | Frequency Authorization (Dec 1988) |
| NFS: 1852.227-11 | Patent Rights – Retention by the Contractor (Short Form) |
| NFS: 1852.227-85 | Invention Reporting and Rights—Foreign (Apr 1986) |
| NFS: 1852.242-78 | Emergency Medical Services and Evacuation (Apr 2001) |
| NFS: 1852.245-72 | Liability for Government Property Furnished for Repair or Other Services (Jan 2011) |
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| Applicable for Subcontract Values Greater than \$2,000 | |
| 52.222-16 | Approval of Wage Rates (Dec 1988) <i>Note 1: Applies to cost-reimbursement construction to be performed within the United States, except for contracts with a State or political subdivision thereof.</i> |
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| Applicable for Subcontract Values Greater than \$2,500 | |
| 52.222-41 | Service Contract Act of 1965 (Nov 2007) <i>Note 1: Paragraph (a) Definitions apply</i> |
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| Applicable for Subcontract Values Greater than \$150,000 | |
| 52.203-16 | Preventing Personal Conflicts of Interest (Dec 2011) <i>Note 1: "Government" means "Government"</i> <i>Note 2: "Contracting Officer" means "Contracting Officer"</i> |
| 52.223-9 | Estimate of Percentage of Recovered Material Content for EPA-Designated Items (May 2008) <i>Note 1: In Paragraph (b)(2) after "Submit this information to" insert in blank 'the JPL Environmental Affairs Program Office (EAPO) through the JPL Subcontracts Manager annually or if the subcontract term is less than one year, upon completion of this subcontract.'</i> |
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| 52.229-6 | Taxes- Foreign Fixed-Price Contract (Jun 2003) <i>(Applies when the Subcontract is contemplated and the contract is to be performed wholly or partly in a foreign country, unless it is contemplated that the contract will be with a foreign government)</i> |
| 52.232-29 | Terms for Financing of Purchases of Commercial Items (Feb 2002) <i>Note1: Paragraph (g) does not apply</i> |
| 52.232-30 | Installment Payments for Commercial Items (Oct 1995) <i>Note 1: Paragraph (g) does not apply</i> |
| Applicable for Subcontract Values Greater than \$650,000 | |
| 52.230-2 | Cost Accounting Standards (Oct 2010) <i>(This clause, except Paragraph (b), applies to all negotiated subcontracts, unless the subcontract is exempted [see 48 CFR 9903.201-1]. In addition to any other remedies provided by law or under this subcontract, subcontractor agrees to indemnify and hold JPL harmless to the full extent of any loss, damage, or expense incurred by JPL as a result of failure of the subcontractor.)</i> <i>Note 1: "Contracting Officer" means "Contracting Officer."</i> <i>Note 2: "Government" means "Government."</i> |
| 52.230-3 | Disclosure and Consistency of Cost Accounting Practices (Oct 2008) <i>(Applies: in negotiated contracts when the contract amount is over \$650,000, but less than \$50 million, and the offeror certifies it is eligible for and elects to use modified CAS coverage (see 48 CFR 9903.201-2 (FAR Appendix)), unless the clause prescribed in paragraph (c) of this subsection is used.)</i> |
| 52.230-6 | Administration of Cost Accounting Standards (Jun 2010) <i>Note 1: "Contracting Officer" means "Contracting Officer."</i> <i>Note 2: "Government" means "Government."</i> |